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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,982	07/29/2003	Larry L. Bradford	ACA6114US2	7140

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EXAMINER

SERGEANT, RABON A

ART UNIT PAPER NUMBER

1711

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/628,982	BRADFORD ET AL.	
	Examiner	Art Unit	
	Rabon Sergeant	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6,9,11,13,14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,9,11,13,14 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 1, 4, 6, 9, 11, 13, 14, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Adequate support has not been provided for the amendment specifying that component (a) is a monomeric halogenated alkylphosphate ester non-aromatic organic flame retardant. Specifically, support has not been provided for specifying that the flame retardant is non-aromatic. Applicants have argued that support exists at page 2, lines 17-27 of the specification. The examiner has considered this passage; however, the passage is insufficient to provide support for the entire genus of compounds encompassed by the claim language. The passage only provides support for the specifically recited compounds. Furthermore, the cited passage indicating that the phosphate esters contain from about 1 to about 5 carbon atoms in their alkyl groups in no way specifies that aromatic groups are not present.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 4, 6, 9, 11, 13, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fearing ('534 or '633) in view of Hardy et al. ('035) and Biranowski ('200).

Fearing discloses functional or non-functional poly(oxyorganophosphate/phosphonate) flame retardants which may be used in combination with other flame retardant agents. See abstract and column 8, lines 5-36 within the references. Accordingly, Fearing establishes that functional or non-functional oligomeric phosphate linkage containing flame retardants may be blended with other flame retardants.

4. Fearing fails to disclose applicants' claimed oligomeric organophosphate flame retardant (first difference) and specific classes of flame retardants that meet applicants' component (a) (second difference). However, applicants' claimed oligomeric organophosphate flame retardants and the blending of oligomeric organophosphorus flame retardants with flame retardants that correspond to applicants' component (a) were known at the time of invention. With respect to the first difference, Hardy et al. disclose oligomeric flame retardants that correspond to applicants' claimed oligomeric flame retardants. See abstract. In view of the strong chemical and structural similarities between the oligomeric phosphorus compounds of Fearing and Hardy et al. and their utilities as polyurethane flame retardants, the position is taken that one of ordinary skill would have expected them to have comparable flame retarding qualities or to function as equivalents. It has been held that it is obvious to utilize a component for its known function. *In re Linder*, 173 USPQ 356. *In re Dial et al.*, 140 USPQ 244. Furthermore, it has been held that it

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is obvious to substitute one equivalent for another. *In re Ruff*, 118 USPQ 343 (CCPA 1958).

Therefore, it would have been obvious to replace the poly(oxyorganophosphate/phosphonate) of Fearing with the oligomeric organophosphate of Hardy et al. With respect to the second difference, it is initially noted that Fearing establishes the equivalency of reactive and non-reactive oligomeric phosphorus containing compounds in their capacity as flame retardants, and it is again noted that Fearing establishes that either the reactive or non-reactive oligomeric flame retardants may be blended with other flame retardants. Biranowski discloses that flame retardants that correspond to applicants' component (a) are blended with oligomeric phosphonate flame retardants to yield a flame retardant composition for polyurethanes. As reasoned before, given the strong chemical and structural similarities between the oligomeric phosphorus compounds of Fearing and Biranowski and their utilities as polyurethane flame retardants, the position is taken that one of ordinary skill would have expected them to have comparable flame retarding qualities or to function as equivalents. Accordingly, given the similarities between the oligomeric compounds and the flame retardant compositions containing them, the position is taken that it would have been obvious to utilize the non-oligomeric flame retardants (applicants' component (a)) of Biranowski as the "other flame retardants" of Fearing. In summation, the relied upon references are considered to establish the equivalency of the respective oligomeric flame retardants and to establish that additional flame retardants, corresponding to applicants' component (a) may be blended with the oligomeric flame retardants to yield a flame retardant composition, suitable for use within polymeric compositions, such as polyurethanes. The position is ultimately taken that applicants have simply blended known flame retardants in a manner clearly suggested by the prior art, so as to arrive at the instant invention.

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5. Applicants have presented two arguments in response to the examiner's position; the first argument being essentially that the examiner has failed to provide the required motivation to modify the prior art as set forth and the second argument being that the unexpected results within Examples 9-15 rebut the *prima facie* case of obviousness. In response to the first argument, the examiner has set forth a proper *prima facie* case of obviousness. In accordance with current Office practice, the examiner has set forth how the relied upon prior art relates to the claimed invention, how it differs, and why it would have been obvious to modify the prior art, so as to arrive at applicants' invention. Applicants' response has in no way established that the rejection is improper. In response to the second argument, the examiner has again reviewed Examples 9-15; however, the showings are insufficient to rebut the *prima facie* case of obviousness. Firstly, applicants have failed to indicate how these examples relate to the relied upon prior art; therefore, it has not been established that a comparison has been made that is representative of the closest available art. Secondly, applicants' examples are not commensurate in scope with the claims. It has been held that the claims must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. It has further been held that a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. Applicants' argued examples are limited to the use of two specific flame retardants in five specific ratios; however applicants' claims are not so limited with respect to the species of flame retardants or the quantities utilized. Accordingly, the relied upon examples fail to meet the court established requirements.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
October 29, 2006


RABON SERGENT
PRIMARY EXAMINER